

We claim:

1. A computer-implemented method for adding program elements to
5 programs in a graphical user interface displayed on a computer system, wherein the
computer system includes a display, the method comprising:

displaying one or more windows of a program currently being edited on the
display;

displaying a search window on the display;

10 receiving user input in the search window specifying a search criteria;

identifying and displaying information regarding a plurality of possible program
elements in the search window in accordance with the search criteria user input;

receiving user input selecting a program element from the plurality of possible
program elements; and

15 incorporating the selected program element in a first window of the one or more
windows of the program.

2. The method of claim 1, wherein the plurality of possible program elements
are selectable by the user from the search window to add functionality to the one or more
20 windows of the program currently being edited.

3. The method of claim 1, wherein the plurality of possible program elements
includes graphical user interface elements each selectable by the user to add a particular
graphical user interface function associated with the particular graphical user interface
25 element to the program currently being edited.

4. The method of claim 1, wherein the plurality of possible program elements
includes function elements each selectable by the user to add a particular computer-

executable function associated with the particular function element to the program currently being edited.

5 5. The method of claim 1, wherein said incorporating the selected program element in the first window comprises receiving user input to drag-and-drop the selected program element into the first window.

10 6. The method of claim 1, wherein the user input in the search window specifying a search criteria includes a search string, and wherein said identifying and displaying information regarding the plurality of possible program elements in the search window in accordance with the search criteria user input comprises:

 searching for the search string in a plurality of text items comprising text items related to the program elements; and

15 displaying one or more text items located by said searching for the search string, wherein each of the one or more located text items includes the search string, and wherein each of the one or more located text items references one of the plurality of possible program elements.

20 7. The method of claim 6, wherein the user input selecting the program element from the plurality of possible program elements specifies one of the one or more located text items, wherein the specified located text item references the selected program element.

25 8. The method of claim 1, wherein the graphical user interface comprises a hierarchy of palette windows, wherein one or more of the palette windows in the hierarchy each comprise one or more palette items that each represent one of the plurality of possible program elements.

5

9. The method of claim 1, wherein the search window includes one or more navigation items for navigating among the hierarchy of palette windows, wherein the navigation items include one or more of a forward navigation item, a backward navigation item, and an up navigation item.

10. The method of claim 1, wherein said displaying the search window is performed in response to user input to the graphical user interface.

10

11. A computer-implemented method for adding program elements to programs using a graphical user interface displayed on a computer system, wherein the graphical user interface includes including a hierarch of palette windows, and wherein the computer system includes a display, the method comprising:

15

displaying on the display a first palette window from the hierarchy of palette windows, wherein one or more of the palette windows in the hierarchy comprise palette items that are selectable by a user to add functionality to one or more windows of a program currently being edited in the graphical user interface, and wherein one or more of the palette windows in the hierarchy of palette windows comprises a search item;

20

receiving user input selecting a search item of the first palette window;
displaying a search window in response to said user input selecting the search item;

25

receiving user input in the search window specifying a search criteria;
identifying and displaying information regarding a plurality of possible palette items in the search window in accordance with the search criteria user input;
receiving user input selecting a palette item from the plurality of possible palette items; and
incorporating the selected palette item in a first window of the one or more windows of the program.

12. The method of claim 11, wherein the palette items include icons that are selectable by the user to incorporate graphical user interface elements in a graphical user interface of the program currently being edited.

5 13. The method of claim 11, wherein the program currently being edited is a graphical program, and wherein the palette items include icons that are selectable by the user to include function nodes in the graphical program.

10 14. The method of claim 11, wherein said incorporating the selected palette item in the first window comprises receiving user input to drag-and-drop the selected palette item into the first window.

15 15. The method of claim 11, wherein the user input in the search window specifying the search criteria includes a search string, and wherein said identifying and displaying information regarding the plurality of possible palette items in the search window comprises:

searching for the search string in a plurality of text items comprising text items related to the palette items; and

20 displaying one or more text items located by said searching in the search window, wherein each of the one or more located text items includes the search string, and wherein each of the one or more located text items references one of the plurality of possible palette items.

25 16. The method of claim 15, wherein the user input selecting the palette item from the plurality of possible palette items specifies one of the one or more located text items in the search window, wherein the specified located text item references the selected palette item.

17. The method of claim 11, wherein the plurality of possible palette items includes palette items from the one or more of the palette windows in the hierarchy comprising palette items.

5 18. The method of claim 11, wherein the plurality of possible palette items includes palette items from a plurality of hierarchies of palette windows.

19. The method of claim 11, wherein the search window includes one or more navigation items for navigating among the hierarchy of palette windows, wherein the
10 navigation items include one or more of a forward navigation item, a backward navigation item, and an up navigation item.

20. A computer-implemented method for searching a hierarchy of palette
15 windows in a graphical user interface displayed on a computer system, wherein the computer system includes a display, the method comprising:

displaying on the display a first palette window from the hierarchy of palette windows, wherein one or more of the palette windows in the hierarchy comprise palette items that are selectable by a user to include functionality in a program currently being
20 edited in the graphical user interface;

receiving user input selecting a search item of the first palette window;

displaying a search window in response to said user input selecting the search item;

receiving user input in the search window specifying a search criteria;

25 identifying and displaying information regarding a plurality of possible palette windows in the search window in accordance with the search criteria;

receiving user input selecting a second palette window from the plurality of possible palette windows; and

displaying the second palette window in response to said user input selecting the second palette window.

21. The method of claim 20, wherein said user input in the search window specifying the search criteria includes a search string, and wherein said identifying and displaying information regarding the plurality of possible palette windows in the search window in accordance with the search criteria user input comprises:

searching for the search string in a plurality of text items related to the palette windows in the hierarchy; and

10 displaying one or more located text items in the search window, wherein each of the one or more located text items includes the search string, and wherein each of the one or more located text items references one of the plurality of possible palette windows.

22. The method of claim 21, wherein the user input selecting the new palette window from the plurality of possible palette windows specifies one of the one or more located text items in the search window, wherein the specified located text item references the new palette window.

23. The method of claim 20, wherein the plurality of possible palette windows includes palette windows from a plurality of hierarchies of palette windows.

24. The method of claim 20, wherein the search window includes one or more navigation items for navigating among the hierarchy of palette windows, and wherein the method further comprises:

25 prior to said displaying the search window in response to said user input selecting the search item:

receiving user input selecting a navigation item displayed on the search window; and

displaying a previously displayed palette window in the hierarchy of palette windows in response to said user input selecting the navigation item.

25. The method of claim 24, wherein the navigation item is one of a forward
5 navigation item, a back navigation item, and an up navigation item.

26. The method of claim 24, wherein the navigation item is a back navigation
item operable when selected to display a most recently previously displayed palette
window in a backward direction.

10

27. The method of claim 24, wherein the navigation item is a forward
navigation item operable when selected to display a most recently previously displayed
palette window in a forward direction.

28. The method of claim 24, wherein the navigation item is an up navigation
15 item operable when selected to display a parent palette window of the first palette
window, regardless of the most recently previously displayed palette window.

29. The method of claim 20, wherein the palette items include icons that are
20 selectable by the user to incorporate graphical user interface elements and function nodes
in a graphical user interface of the program.

30. The method of claim 20, wherein the program is a graphical program, and
wherein the palette items include icons that are selectable by the user to add functionality
25 to the graphical program.

31. The method of claim 20, wherein the information regarding the plurality
of possible palette windows displayed in the search window includes information
regarding one or more possible program elements, wherein the information regarding the

one or more possible program elements is selectable by the user from the search window to add functionality to the program.

5 32. A system comprising:
 a memory configured to store program instructions;
 an input device configured to receive user input;
 a display device; and
 a processor configured to read the program instructions from the memory and to
10 execute the program instructions, wherein, in response to execution of the program
instructions, the processor is operable to:
 display on the display one or more windows of a program currently being
edited in a graphical user interface;
 display a search window on the display;
15 receive user input in the search window specifying a search criteria;
 identify and display information regarding a plurality of possible program
elements in the search window in accordance with the search criteria user input;
 receive user input selecting a program element from the plurality of
possible program elements; and
20 incorporate the selected program element in a first window of the one or
more windows of the program.

 33. The system of claim 32, wherein the plurality of possible program
elements are selectable by the user from the search window to add functionality to the
25 one or more windows of the program currently being edited.

 34. The system of claim 32, wherein the plurality of possible program
elements includes graphical user interface elements each selectable by the user to add a

particular graphical user interface function associated with the particular graphical user interface element to the program currently being edited.

35. The system of claim 32, wherein the plurality of possible program
5 elements includes function elements each selectable by the user to add a particular computer-executable function associated with the particular function element to the program currently being edited.

36. The system of claim 32, wherein, in said incorporating the selected
10 program element in the first window, the processor is further operable to:
receive user input to drag-and-drop the selected program element into the first window.

37. The system of claim 32, wherein the user input in the search window
15 specifying a search criteria includes a search string, and wherein, in said identifying and displaying information regarding the plurality of possible program elements in the search window, the processor is further operable to:

search for the search string in a plurality of text items comprising text items related to the program elements; and

20 display one or more text items located by said searching for the search string, wherein each of the one or more located text items includes the search string, and wherein each of the one or more located text items references one of the plurality of possible program elements;

wherein the user input selecting the program element from the plurality of
25 possible program elements specifies one of the one or more located text items, wherein the specified located text item references the selected program element.

38. The system of claim 32, wherein the graphical user interface comprises a hierarchy of palette windows, wherein one or more of the palette windows in the

hierarchy each comprise one or more palette items that each represent one of the plurality of possible program elements.

39. The system of claim 32, wherein the search window includes one or more navigation items for navigating among the hierarchy of palette windows, wherein the navigation items include one or more of a forward navigation item, a backward navigation item, and an up navigation item.

40. A system comprising:
a memory configured to store program instructions;
an input device configured to receive user input;
a display device; and
a processor configured to read the program instructions from the memory and to execute the program instructions, wherein, in response to execution of the program instructions, the processor is operable to:
display on the display a first palette window from a hierarchy of palette windows of a graphical user interface, wherein one or more of the palette windows in the hierarchy comprise palette items that are selectable by a user to add functionality to one or more windows of a program currently being edited in the graphical user interface, and wherein one or more of the palette windows in the hierarchy of palette windows comprises a search item;
receive user input selecting a search item of the first palette window;
display a search window in response to said user input selecting the search item;
receive user input in the search window specifying a search criteria;
identify and display information regarding a plurality of possible palette items in the search window in accordance with the search criteria user input;

receive user input selecting a palette item from the plurality of possible palette items; and

incorporate the selected palette item in a first window of the one or more windows of the program.

5

41. The system of claim 40, wherein the program currently being edited is a graphical program, wherein the palette items include icons that are selectable by the user to incorporate graphical user interface elements in a graphical user interface of the program currently being edited, and wherein the palette items further include icons that are selectable by the user to include function nodes in the graphical program.

10

42. The system of claim 40, wherein, in said incorporating the selected palette item in the first window, the processor is further operable to:

receive user input to drag-and-drop the selected palette item into the first window.

15

43. The system of claim 40, wherein the user input in the search window specifying the search criteria includes a search string, and wherein, in said identifying and displaying information regarding the plurality of possible palette items in the search window, the processor is further operable to:

search for the search string in a plurality of text items comprising text items related to the palette items; and

20

display one or more text items located by said searching in the search window, wherein each of the one or more located text items includes the search string, and wherein each of the one or more located text items references one of the plurality of possible palette items;

25

wherein the user input selecting the palette item from the plurality of possible palette items specifies one of the one or more located text items in the search window, wherein the specified located text item references the selected palette item.

44. A system comprising:

a memory configured to store program instructions;

an input device configured to receive user input;

a display device; and

a processor configured to read the program instructions from the memory and to execute the program instructions, wherein, in response to execution of the program instructions, the processor is operable to:

display on the display a first palette window from a hierarchy of palette
10 windows in a graphical user interface, wherein one or more of the palette windows in the
hierarchy comprise palette items that are selectable by a user to include functionality in a
program;

receive user input selecting a search item of the first palette window;

display a search window on the display in response to said user input

```

15  selecting the search item;

```

receive user input in the search window specifying a search criteria;

identify and displaying information regarding a plurality of possible palette windows in the search window in accordance with the search criteria;

receive user input selecting a second palette window from the plurality of

20 possible palette windows; and

display the second palette window on the display in response to said user input selecting the second palette window.

45. The system of claim 44, wherein said user input in the search window
25 specifying the search criteria includes a search string, and wherein, in said identifying
and displaying information regarding the plurality of possible palette windows in the
search window in accordance with the search criteria user input, the processor is further
operable to:

search for the search string in a plurality of text items related to the palette windows in the hierarchy; and

display one or more located text items in the search window, wherein each of the one or more located text items includes the search string, and wherein each of the one or more located text items references one of the plurality of possible palette windows;

wherein the user input selecting the new palette window from the plurality of possible palette windows specifies one of the one or more located text items in the search window, wherein the specified located text item references the new palette window.

10 46. The system of claim 44, wherein the search window includes one or more navigation items for navigating among the hierarchy of palette windows, and wherein, prior to said displaying the search window in response to said user input selecting the search item, the processor is further operable to:

15 receive user input selecting a navigation item displayed on the search window;
and

display a previously displayed palette window in the hierarchy of palette windows in response to said user input selecting the navigation item;

wherein the navigation item is one of a forward navigation item, a back navigation item, and an up navigation item.

20 47. The system of claim 44, wherein the program is a graphical program, and wherein the palette items include icons that are selectable by the user to add functionality to the graphical program.

25 48. The system of claim 44, wherein the information regarding the plurality of possible palette windows displayed in the search window includes information regarding one or more possible program elements, wherein the information regarding the one or more possible program elements is selectable by the user from the search window to add functionality to the program.

Accepted for Publication

49. A carrier medium comprising program instructions, wherein the program instructions are computer-executable to implement:

- 5 displaying one or more windows of a program currently being edited in graphical user interface displayed on a computer system;
- displaying a search window on the computer system;
- receiving user input in the search window specifying a search criteria;
- identifying and displaying information regarding a plurality of possible program
- 10 elements in the search window in accordance with the search criteria user input;
- receiving user input selecting a program element from the plurality of possible program elements; and
- incorporating the selected program element in a first window of the one or more windows of the program;
- 15 wherein the plurality of possible program elements are selectable by the user from the search window to add functionality to the one or more windows of the program currently being edited.

50. The carrier medium of claim 49, wherein said incorporating the selected

20 program element in the first window comprises receiving user input to drag-and-drop the selected program element into the first window.

51. The method of claim 49, wherein the graphical user interface comprises a hierarchy of palette windows, wherein one or more of the palette windows in the

25 hierarchy each comprise one or more palette items that each represent one of the plurality of possible program elements.

52. A carrier medium comprising program instructions, wherein the program instructions are computer-executable to implement:

displaying a first palette window from a hierarchy of palette windows in a graphical user interface, wherein one or more of the palette windows in the hierarchy
5 comprise palette items that are selectable by a user to add functionality to one or more windows of a program currently being edited in the graphical user interface, and wherein one or more of the palette windows in the hierarchy of palette windows comprises a search item;

receiving user input selecting a search item of the first palette window;
10 displaying a search window in response to said user input selecting the search item;

receiving user input in the search window specifying a search criteria;
identifying and displaying information regarding a plurality of possible palette items in the search window in accordance with the search criteria user input;

15 receiving user input selecting a palette item from the plurality of possible palette items; and

incorporating the selected palette item in a first window of the one or more windows of the program.

20 53. The carrier medium of claim 52, wherein said incorporating the selected palette item in the first window comprises receiving user input to drag-and-drop the selected palette item into the first window.

25 54. A carrier medium comprising program instructions, wherein the program instructions are computer-executable to implement:

displaying a first palette window from a hierarchy of palette windows in a graphical user interface, wherein one or more of the palette windows in the hierarchy

comprise palette items that are selectable by a user to include functionality in a program currently being edited in the graphical user interface;

receiving user input selecting a search item of the first palette window;

5 displaying a search window in response to said user input selecting the search item;

receiving user input in the search window specifying a search criteria;

identifying and displaying information regarding a plurality of possible palette windows in the search window in accordance with the search criteria;

10 receiving user input selecting a second palette window from the plurality of possible palette windows; and

displaying the second palette window in response to said user input selecting the second palette window;

15 wherein the information regarding the plurality of possible palette windows displayed in the search window includes information regarding one or more possible program elements, wherein the information regarding the one or more possible program elements is selectable by the user from the search window to add functionality to the program.

20

25